

32761

S/205/61/001/006/021/022  
D243/D305

27.2400 also 2209

AUTHORS: Semenov, L.F., Avdzhian, M.V., Bochkov, N.P., and  
Topchiyan, L.N.

TITLE: Cell division and nucleic acid metabolism in the muco-  
sa of the small intestine after treating animals with  
radio-protective substances

PERIODICAL: Radiobiologiya, v. 1, no. 6, 1961, 953 - 957

TEXT: The authors wished to study the effects of the most effi-  
cient radio-protective substances ( $\beta$ -mercaptoethylamine, adrenali-  
ne, acetylcholine and combinations of these) on cell division and  
nucleic acid metabolism in the mucosa of the small intestine in  
normal animals. Data in this field are few and contradictory. Opti-  
mally protective doses of the named substances were given to 198  
white rats, of 200 - 230 g weight, and 179 guinea-pigs of 300-450 g  
weight, of both sexes. The animals were killed 10 - 15 mins., and  
1 and 3 hours later. To study nucleic acid metabolism, 16 - 20 mi-  
crocuries of  $^{32}\text{P}$  in sodium phosphate, in 0.2 - 0.3 ml of aqueous  
solution, were given subcutaneously immediately after the protecti-  
Card 1/3

32761

S/205/61/001/006/021/022

D243/D305

Cell division and nucleic acid ...

ve substances and the animals were killed three hours later. Sections of intestinal mucosa were treated with 10 % trichloroacetic acid and separation of the nucleic fraction and fractionation of DNA was carried out by a modified Schmidt-Tangauzer method. Radio-phosphorus uptake, measured with a -2 (B-2) counting apparatus, indicated the rate of nucleic compound synthesis. In studying cell division, the control and experimental animals were killed at the same time. Mitosis was estimated on fixed and stained diodenal sections, the results being assessed statistically by Fisher-Styudent's method.  $\beta$ -mercaptoethylamine and acetylcholine had no effect on the metabolism of nucleic acids and the DNA fraction. Adrenaline caused marked depression (60 - 88 %) in both animals, as did adrenaline plus acetylcholine (72 - 92 %). 75 rats and 79 guinea-pigs were used for mitosis estimation.  $\beta$ -mercaptoethylamine and acetylcholine caused a transient depression of mitotic activity which developed rapidly (15 mins) and was greater in rats (24 - 31 %). Adrenaline caused a gradual depression in guinea-pigs (28 %) and rats (29 %) maximal in three hours. Adrenaline plus acetylcholine caused rapid, prolonged depression. The actions of acetylcholine were confirmed by supplementary experiments. It seems that acetylcholine

Card 2/3

Cell division and nucleic acid...

32761  
S/205/61/001/006/021/022  
D243/D305

and  $\beta$ -mercaptoethylamine shorten the prophase and metaphase by almost 50 % and thus speed up the mitotic process. Adrenaline only depresses cell division. No correlation could be established between the radioprotective effect of these substances and their effect on nucleic acid metabolism and cell division. There are 5 tables and 11 references: 5 Soviet-bloc and 6 non-Soviet-bloc. The references to the English-language publications read as follows: C. Van der Meer and D. van Bekkum, Inter. J. Radiat. Biol., 5, 1959; R. Conard, Radiation res., 1, 492, 1954, 1959; J. Maisin, J. Moutschen, J. Novelli and D. Doherty, Radiation res., 11, 3, 453, 1959.

ASSOCIATION: Institut eksperimental'noy patologii i terapii AMN SSSR, Sukhumi (Institute of Experimental Pathology and Therapy, AMS USSR, Sukhumi) X

SUBMITTED: June 22, 1961

Card 3/3

27.2460

L1850  
S/205/62/002/004/014/014  
I015/I215

AUTHORS: Zeytunyan, K.A., Konstantinova, M.M., and Semenov, L.F.

TITLE: The effect of certain antiradiation agents on the oxygen level in tissues in relation with their effect on the radiosensitivity of animals

PERIODICAL: Radiobiologiya, v.2, no.4, 1962, 616-619

TEXT: This is the continuation of a previous study. The experiments were carried out on albino mice of both sexes, weighing 18-20g. Adrenalin (0.02mg/mouse), acetylcholin (0.6mg/mouse), tryptamine (1.5mg/mouse), serotonin (0.5mg/mouse), phenylethylamine (0.8mg/mouse), thiourea (45.0mg/mouse) and aminoethylisothiouracil (AET) (3.0mg/mouse) were injected s.c. in aqueous solutions. The oxygen tension in liver and spleen was determined polarographically. The effect of these substances on the oxygen tension was different for spleen and for liver, and varied also with each substance. Acetylcholin brought about the most marked

Card 1/3

S/205/62/002/004/014/014  
1015/1215

The effect of certain antiradiation...

decrease in oxygen tension in both the spleen (59%) and the liver. The combined administration of serotonin, adrenalin and tryptamine with acetylcholin, brought about a moderate increase in hypoxia in the spleen, in comparison with acetylcholin alone, whereas phenylethylamine lowered the effect of acetylcholin. No such effect was observed, however, in the liver. A certain parallelism was found to exist between the hypoxia-promoting-effect, and the radioprotective properties of the substances examined, and it was assumed that these agents act as radioprotectors by decreasing the oxygen tension in tissues. The sulphur-containing compounds did not affect the oxygen tension and it was therefore assumed that the radioprotecting mechanism of these compounds is of a different nature. There are 4 figures and 1 table. ✓

ASSOCIATION: Institut eksperimental'noy patologii i terapii  
AMN SSSR, Sukhumi (Institute of Experimental

Card 2/3

SEMENOV, L.F.

Use of streptomycin in the prevention of acute radiation  
sickness. Antibiotiki 7 no.10:912-916 0'62 (MIRA 16:12)

1. Institut eksperimental'noy patologii i terapii AN SSSR,  
Sukhumi.

SPASSKAYA, I.G.; PLATONOVA, G.N.; SOLOPAYEVA, I.M.; SEMEKOV, L.F.;  
ZEYTUNYAN, K.A.; LARIONOV, L.F.

Reducing the toxicity of dcpn by means of aminoethylisothiuronium  
(AET) in experiments on monkeys. Vop. onk. 9 no.12:44-46 '63.

(MIRA 17:12)

1. Iz laboratorii eksperimental'noy khimioterapii (zav. - chlen-korrespondent AMN SSSR prof. L.F. Larionov) Instituta eksperimental'noy i klinicheskoy onkologii AMN SSSR (direktor-deystvite'l'nyy chlen AMN SSSR prof. N.N. Blokhin) i iz laboratorii radiobiologii (zav. - L.F. Semenov) Instituta eksperimental'noy patologii i terapii (direktor - prof. B.A. Lapin). Adres avtorov: Moskva, I-110, ul. Shchepkina, 61/2, korp.9, Institut eksperimental'noy i klinicheskoy onkologii AMN SSSR.

SEMENOV, L. F.

AID Nr. 995-2 21 June

PROPHYLACTIC EFFECT OF SEROTONIN ON ACUTE RADIATION SICKNESS  
IN MONKEYS (USSR)

Semenov, L. F., L. F. Larionov, M. F. Petrova, Ye. Ch. Pukhal'skaya,  
and K. A. Zeytunyan. Meditsinskaya radiologiya, v. 8, no. 4, Apr 1963,  
58-62. S/241/63/008/004/002/006

Rhesus monkeys weighing 2.5 to 4.0 kg were subjected to total-body  $\gamma$ -radiation ( $\text{Co}^{60}$ ) with a single dose of 630 r ( $\text{LD}_{50}$ ) or 700 r ( $\text{LD}_{100}$ ) at 96 to 102 r/min. To prevent dysentery, the animals were given levomycetin (400 mg per animal) and biomycin (100 mg per animal) every other day starting 24 hrs after exposure. Serotonin hydrochloride was injected intramuscularly (aqueous solutions) in doses of 50 to 175 mg/kg or 35 to 40 mg/kg 5 to 10 min before irradiation; doses of 100, 150, and 175 mg/kg proved toxic. Spasms, salivation, and contraction of the muscles of the extremities were observed a few minutes after the injection of serotonin, followed by coma and death within 2 to 40 hrs. A dose of 50 mg/kg of serotonin caused spasms and coma which gradually disappeared, after which the animals recovered. Doses below 40 mg/kg caused slight hyperemia of facial

Card 1/2

AID Nr. 995-2 21 June

PROPHYLACTIC EFFECT OF SEROTONIN [Cont'd]

S/241/63/008/004/002/006

skin and increased the muscular tonus of the toes but did not markedly impair the vital activity of the animals. Acute radiation sickness induced in rhesus monkeys by  $\gamma$ -irradiation with 630 r caused the death of most of the animals (controls), although prophylactic use of serotonin (35 to 40 mg/kg) alleviated the symptoms of radiation sickness and increased the survival rate (6 monkeys out of 17 survived after a 30-day observation period). When subjected to  $\gamma$ -irradiation with 700 r ( $> LD_{100}$ ) and treated with serotonin hydrochloride (35 to 40 mg/kg prior to exposure) and antibiotics, the monkeys succumbed within 17 days. [SGM]

Card 2/2

SEMEINOV, L. F.  
AID Nr. 996-6 24 June F.

PROPHYLACTIC EFFECT OF 5-METHOXYTRYPTAMINE ON RADIATION  
SICKNESS IN MONKEYS (USSR)

Krasnykh, I. G., P. G. Zherebchenko, L. F. Semenov, N. N. Suvorov, and  
K. A. Zeytunyan. Radiobiologiya, v. 3, no. 2, 1963, 259-261.  
S/205/63/003/002/016/024

Radiation sickness was induced in rhesus monkeys by subjecting them to  $\gamma$ -irradiation with 607 r at 81 r/min for 7.5 min. Survival of the animals for 30 days after exposure, severity of individual symptoms, and changes in body weight, mean life span, and peripheral blood were used as indices to evaluate the prophylactic effect of 5-methoxytryptamine. The monkeys were given injections of syntomycin and levomycin every other day to prevent dysentery. 5-Methoxytryptamine was administered intramuscularly in a dose of 25 mg/kg 10 min before exposure, or *per os* in a dose of 250 mg/kg; 30 min before exposure. The control animals died within 6 to 17 days from severe acute radiation sickness (mean life span, 9.2 days). Disturbances

Card 1/2

• AID Nr. 996-6 24 June

## PROPHYLATIC EFFECT [Cont'd]

S/205/63/003/002/016/024

in the general condition of the control animals became evident by the third day. Towards the end their weight decreased 18 to 28% and the leucocyte count decreased to 3% of the initial level. Hemorrhages, ulcers, and necrosis of the oral mucosa were observed. Of the seven monkeys injected intramuscularly with 25 mg/kg of 5-methoxytryptamine, one survived 30 days; the mean life span of the other six was 17.3 days. Of the eight monkeys given 250 mg/kg of 5-methoxytryptamine *per os*, three survived and the mean life span of the rest was 14.0 days. Symptoms of radiation sickness in the two groups injected with 5-methoxytryptamine were much milder than in the control group. The highest rates of survival and increased life span were found in the group that received 250 mg/kg of the protector *per os*. The general condition of these animals was only slightly affected, their weight loss was only 10%, and they suffered less from hemorrhages than the other two groups. Pneumonia was observed in one out of five monkeys treated *per os* and in three out of six in the control group. 5-Methoxytryptamine proved to be most effective when administered *per os*.

[SGM]

Card 2/2

1. Effect of some neuroleptic agents on the oxygen level in the

brain. Polish: J. Psychiatry 4 (1975) 7-10.

(1975 12:4)

1. Institut eksperymentalny patologii i toksologii, M. S. S. S. R.,  
Moscow.

L 31368-65 EWG(j)/EWP(m)

ACCESSION NR: APL046444

S/0205/64/004/005/0756/0759

AUTHOR: Strelkov, R. B.; Samanov, L. F.

TITLE: Effects of some radioprotectors on animal brain oxygen levels

SOURCE: Radiobiologiya, v. 4, no. 5, 1964, 756-759

TOPIC TAGS: animal, mouse, radioprotector, amine, sulfur, brain tissue, oxygen voltage, oxygen level, polarography, adrenalin, cystamine, histamine, acetylcholine

ABSTRACT: In experiments on 640 white mice (18-22 g) the effects of two groups of radioprotectors (amine compounds and sulfur bearing preparations) were investigated in relation to oxygen tension of brain tissue, oxidation levels in nerve centers and at peripheral points, and the general state of the central nervous system. After initial oxygen tension levels of the brain were determined by a polarographic method for each animal without anesthesia, a hole was drilled in the skull and a platinum electrode was implanted in the brain tissue and an indifferent silver chloride electrode was affixed to the animal's back extremity. Optimal doses of the following

Card 1/3

L 31368-65

ACCESSION NR: AP4046444

radioprotectors (aqueous solutions) were administered subcutaneously: adrenalin, serotonin, metoxytryptamine, histamine, acetylcholine combined with amines, beta-mercaptoethylamine, cystamine, aminoethylisothiuron (AET), thiourea, and unithiol. Biopotential shifts were observed for 45-60 min following administration. In additional experiments radioprotector effects on the oxygen level of the spleen and liver were investigated and also the effects of anesthetics on brain oxygen levels. Results show that radioprotectors of different structure do not produce the same type of brain oxygen level changes. The sulfur bearing preparations AET, cystamine, beta-mercaptoethylamine and thiourea do not affect the brain tissue oxygen level. Most of the amine radioprotectors induce an increase of the brain tissue oxygen level and contribute to hypoxia development in the spleen and liver tissues. The exceptions are histamine and acetylcholine which do not increase the brain oxygen level and sometimes tend to reduce its level. Earlier findings on differences between amine and sulfur bearing radioprotectors were confirmed in the present study. On the basis of comparing brain oxygen level changes and the antiradiation activity of a given preparation, it appears that radioprotective action can take place with an increased

Card 2/3

L 31368-65

ACCESSION NR: AP1046144

brain oxygen level as well as with an unchanged level or even with a somewhat reduced level. If brain oxygen levels are considered an index of CNS physiological activity, then nerve center shifts can be of an excitatory nature or of a depressive nature under the action of various radioprotectors. Orig. art. has: 1 table and 2 figures.

ASSOCIATION: Institut eksperimental'noy patologii i terapii AMN SSSR, Sukhumi (Experimental Pathology and Therapy Institute AMN SSR)

SUBMITTED: 14Feb63

ENCL: 00

SUB CODE: IS, PH

NR REF SOV: 006

OTHER: 005

Card 3/3

L 24044-66 EWT(m) RD

ACC NR: AP6009325

SOURCE CODE: UR/0248/65/000/011/0050/0057

AUTHOR: Semenov, L. F.; Yakovleva, L. A.

ORG: Institute of Experimental Pathology and Therapy, AMN SSSR, Sukh mi (Institut eksperimental'noy patologii i terapii AMN SSSR)

TITLE: Comparison of radiation sickness characteristics in various species of mammals, including primates

SOURCE: AMN SSSR. Vestnik, no. 11, 1965, 50-57

TOPIC TAGS: radiation sickness, gamma irradiation, x ray irradiation, radiation injury, leukopenia, leukopoiesis, experiment animal, radiation biologic effect

ABSTRACT: Data from the literature and the author's findings on acute radiation sickness in mice, rats, guinea pigs, rabbits, dogs, and monkeys are presented. In their experiments, the authors made use of the RUM-3 x-ray machine and a Co<sup>60</sup> gamma ray machine (70-110 rad/min). Data on the effects of total and localized irradiation (abdomen and head) in monkeys (1650-25000 rad) and the survival time (in hours) are given. The disruption of leukopoiesis mechanism, accompanying acute radiation sickness is described. Information on infectious diseases (gingivitis, pneumonia, enteritis and colitus) with which the various animals were affected (in addition to acute radiation sickness) is presented in tabular form. It is concluded that radiation sickness in

UDC: 617-001.28-092.9

Card 1/2

L 24044-66

ACC NR: AP6009325

humans most closely resembles that in monkeys. Orig. art. has: 4 tables.

SUB CODE: 06/ SUBM DATE: 13Jul65/ ORIG REF: 016/ OTH REF: 019

Card 2/2 *dda*

KOLESNIKOV, V.I., SEMENOV, I.P.

Catechol amine content in the tissues of macaco monkeys during early phases of whole-body  $\gamma$ -irradiation. Radiobiologiya 5, no.4:494-500 '65. (MIRA 18:9)

1. Ukrainskiy institut usovershenstvovaniya vrachey, Khar'kov i Institut eksperimental'noy patologii i terapii AMN SSSR, Sukhumi.

SEMENOV, L.F.; YAKOVLEVA, L.A.

Comparative characteristics of radiation sickness in different  
species of mammals including Primates. Vest. AMN SSSR 20 no. 11:  
50-57 '65 (MIRA 19:1)

1. Institut eksperimental'noy patologii i terapii AMN SSSR,  
Sukhimi. Submitted July 13, 1965.

6(6)

SOV/112-59-2-3914

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 2, p 246 (USSR)

AUTHOR: Semenov, L. G.

TITLE: Telecinema Systems (Sistemy telekino)

PERIODICAL: Tr. Televizion. fil.-labor., 1956, Nr 2, pp 38-49

ABSTRACT: TV devices with or without storage are used for scanning cinema pictures in TV practice. Among no-storage systems, the best is a flying-spot system that has a resolving power of over 1,000 lines; the number of gradations that can be transmitted is limited practically by picture tubes only. Among storage-type systems, the iconoscope and image orthicon have the widest use. Both have certain disadvantages as far as half-tone transmission and signal-noise ratio are concerned. The projection, in the telecinema system, differs from the conventional one in that the picture should be projected (in the one-field system) without blacking out; this is attained by pulse strobing, optical compensation, and optical or electronic picture splitting explained in the article.

V.F.A.

Card 1/1

SEMENOV, L.G., gornyy inzh.; BITYUKOV, L.Ye., gornyy inzh.

Loosening of the coal block with the water-infusion  
blasting system in the hydraulic mining of anthracite.  
Ugol' Ukr. 6 no.8:15-17 Ag '62. (MIRA 15:11)

1. Ukrainskiy nauchno-issledovatel'skiy i proyektno-  
konstruktorskiy institut po gidrodobyche uglya.  
(Hydraulic mining)  
(Blasting)

SEMENOV, Leontiy Grigor'yevich; DAM'YE, V.N., rauchn. red.; SOROKINA,  
M.I., red.

[Manual for storage battery electricians] Elektromonter-  
akkumulatorshchik. Moskva, Vysshaya shkola, 1964. 231 p.  
(MIRA 17:6)

SUDNISHNIKOV, B.V.; SEMENOV, L.I.

Increasing the power of sinker drills. Trudy Inst.gor.dela  
Sib.otd.AN SSSR no.2:195-204 '59. (MIRA 13:5)  
(Rock drills)

SENCO<sup>V</sup>, Leonid I.

Geb. in Bugulma, Russland, 1878 19/6. Astronom der Sternwarte Pulkowo 1908-23. Leiter der Abteilung in Nikolajew der Pulkowoer Sternwarte 1923-26. Direktor der Sternwarte in Nikolajew seit 1926.

Source: Portraetgalerie der Astronomischen Gesellschaft, Koenigliche Ungarische Universitaetsdruckerei, Budapest, 1931, Unclassified.

SEMENOV, L. I.

35167. Pryamye Voskhozhdeniya Solntsa, Merkuriya i Venry, NabloDennye V Nikolaeva V  
1929-1935 GG. Trudy Glav. Astron. Observatorii V. Pulkove, Seriya II, T. LXIII,  
1949, s. 117-26

SO: Letopis' Zhurnal'nykh Statey, Vol. 48, Moskva, 1949

SEMENOV, L. I.

35168. Pryamye Voskhozheniya 674 Zvezd Po Nablyudeniya V Nikolaeva (1930.0).  
Trudy Glav. Astron. Observatorii V Pulkove, Seriyai, T. LXIII, 1949, s. 7-115

SO: Letopis' Zhurnal'nykh Statey, Vol. 48, Moskva, 1949

SEMINOV, L.I.

Right ascensions of 571 supplementary stars of the FK3. Trudy  
Glavnoi astronomicheskoi observatorii Ser.2 71:7-29 '58.  
(MIRA 12:6)  
(Stars--Catalogs)

*Semenov, L.I.*  
9(6)

(4)  
SOV/19-59-11-169/277

AUTHORS: Khokhlov, A.F., Antipov, Ye.F., Ol'man, Ye.V.,  
Logunov, S.S., Semenov, L.I., Moskver, K.B., Cher-  
nov, Yu.A., Antonov, S.I., and Rumyantsev, S.I.

TITLE: A Gyroscopic Device

PERIODICAL: Byulleten' izobreteniy, 1959, Nr 11, pp 40-41 (USSR)

ABSTRACT: Class 42c, 35<sup>10</sup>. Nr 120343 (603431/26 of 5 July  
1958). 1) A gyroscopic device for indicating the  
course of sea vessels and airplanes, with selec-  
tive operation as a gyrocompass, a directional  
gyro, or a gyro-magnetic compass. The device in-  
cludes a spherical gyro-motor, a follow-up gyro-  
sphere, and external universal joint with a cor-  
recting balance, servounits for automatic con-  
trol and reading transmission, and a computer for  
compensating high-speed and ballistic deviations  
and carry-over velocities. To dampen the free  
oscillations of the gyroscope, the correcting ba-  
lance is electrically coupled with the servodrive

Card 1/2

SOV/19-59-11-169/277

A Gyroscopic Device

of the vertical axle of the gyroscope. 2) To simplify the design of the device, the springs linking the spherical gyro-motor with the follow-up sphere are also used for transmitting centering efforts and moments to the gyroscope.

Card 2/2

STREL'TSOV, Ivan Vasil'yevich; SEMENOV, Leonid Ivanovich; PYLAYEVA,  
L.N., red.

[Practice in highway construction in Uzbekistan] Opyt  
stroitel'stva avtomobil'nykh dorog v Uzbekistane.  
Tashkent, "Uzbekistan", 1965. 134 p. (MIRA 18:12)

SEMENOV, L.I.

Effectiveness of quenching dust in drilling with the BA-100  
units. Vop. bor' s sil. v Sib. no.1871-73 '61 (MIRA 16:12)

SUKSOV, G.I., inzh.; SEMENOV, L.I., inzh.; GAUN, V.A., inzh.

New, highly efficient, M48 air drills. Gor. zhur. no.9:  
47-18 S '64. (MIRA 17:12)

1. Sibirskoye otdeleniye AN SSSR, Novosibirsk.

SEMENOV, L. K.

Hemp

Further improvements in quality and assortment of production: 4. In the hemp industry. Tekst. prom., No. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 195~~8~~<sub>2</sub>, Uncl.

KOLESOV, D.A., inzh.; SEMENOV, L.N., inzh.; SHPAK, V.P., inzh.

Using collapsible paddings in ship launching from a longitudinal  
slipway. Sudostroenie 30 no.1:40-42 Ja '64. (MIRA 17:3)

KRUTIKOV, I.P., doktor tekhn.nauk; SEMENOV, L.N., inzh.

Remote control of lifting cranes. Stroi.i dor.mashinostr.

4 no.8:23-26 Ag '59. (MIRA 12:12)

(Cranes, derricks, etc.) (Remote control)

POLKOVNIKOV, V.S., kand.tekhn.nauk; SEMENOV, L.N., inzh.; BORISOV, Yu.M.,  
kand.tekhn.nauk

Remote control of hoisting cranes (to be concluded). Vest.mash.  
41 no.10:17-20 0 '61. (MIRA 14:10)  
(Crances, derricks, etc.) (Electronic control)

POLKOVNIKOV, V.S., kand.tekhn.nauk, dotsent; SEMENOV, L.N., inzh.;  
BORISOV, Yu.M., kand.tekhn.nauk, dotsent

Remote control of cranes. Vest.mash. 41 no.11:25-33 N 161.  
(MIRA 14:11)

(Cranes, derricks, etc.)  
(Remote control)

12/14/19 (1029, 1159, 1133)

29338  
S/122/61/000/010/003/011  
D221/D304

AUTHORS: Polkovnikov, V.S., Candidate of Technical Sciences,  
Semenov, L.N., Engineer and Borisov, Yu.M., Candidate  
of Technical Sciences

TITLE: Remote control of hoisting cranes

PERIODICAL: Vestnik mashinostroyeniya, no 10, 1961, 17 - 20

TEXT: Remote control employs several generators of sonic frequencies, operated by coded switches or by a special control apparatus. Frequency modulation is preferable due to smaller power requirements and lesser sensitivity to interference. The prototype was developed and made in the Laboratory of Hoisting and Transporting machines of MVTU im. Bauman, and applied to a 10 ton crane. It is based on the portable transmitter 02P2(ZhP-4P) (02R2(ZhR-4P)), which produces FM signals in the band of 36-46 Mc. The prototype uses carrier frequency of 42.75 Mc, power of transmitter is 0.1 watt, ensuring a reliable connection within 0.5- 1 km. The antenna is formed by a 145 cm flexible rod. A detailed description of trans-

Card 1/5

Remote control of hoisting cranes

29338  
S/122/61/000/010/003/011  
D221/D304

mitter is given in the makers' instructions (Footnote reference: Radiostantsiya tipa ZhR-4P. Kratkoye opisaniye i instruktsiya po ekspluatatsii, remontu i nastroyke. Sovet narodnogo khozyaystva BSSR, 1958). The source of sonic frequencies is made up of RC generators, due to their stable frequency characteristics as well as good wave form, simple design and operation. The one valve RC generator with a phase modulating circuit is illustrated in Fig. 4. Its amplification includes the positive feedback of modulating circuit consisting of  $R_1$ ,  $R_2$ ,  $R_3$ ,  $C_1$ ,  $C_2$  and  $C_3$ . The basic diagram of block

sonic frequency generators is shown in Fig. 5, which includes subminiature valves, 2Zh15E (2Zh15B), heated by 2.2 v, 14 ma, with an anode current of 1.5 ma at 60 v. Two sonic frequency channels are used. An emergency channel is used for no-voltage protection. Another channel is used for switching on an audible signal. In the case of a crane with three mechanisms and a lifting magnet it is necessary to have 4 channels. Multi-pulse binary code can be used to reduce the number of sonic frequencies required for transmitting signals to electric motors. The block has 6 generators. Those with two fixed frequencies feed the controls of motors and the

Card 2/5

S/122/61/000/010/003/011  
D221/D304

Remote control of hoisting cranes

electromagnet, whereas the generators with one frequency feed the emergency channel. The former have two resistance branches in the last loop of phase modulation. A buffer cascade (valve 7J1 (7L)) is employed as load match for generators, and its output of 1v is fed to the modulator of the transmitter. Connection of generators or resistances of phase modulating circuit is ensured by contactors KHL, KBL, ..., KA, push buttons or lever switches mounted on the control panel. Electrical interlocking with emergency switch as well as for changes in rotation of crane motor is ensured by micro-switches. The emergency signal can be fed when the control panel is in zero position. The controller produces signals of inadequate length during fast movements of handle. The prototype used telephone jacks for operating the controller, thus eliminating the complicated system of electrical and mechanical interlocks. Its drawback is that only visual observation allows the position of controller to be determined. Power supplies are provided by an alkaline battery, 2 H-4 (2ZhN-4) which is sufficient for 5 hours work. Anodes and grids are fed by crystal triodes, 6C-B (PZ-V) forming a converter, with a bridge circuit with four diodes, 5C-424 (DG-Ts24)

Card 3/5

29338 S/122/61/000/010/003/011  
D221/D304

Remote control of hoisting cranes

and a rectifier (half-wave) diode 2B (D2V). The end of the article is to follow in the next issue. There are 7 figures.

Fig. 4. Resistance-capacitance generator.

Legend: 1 -  $C_{out}$ .

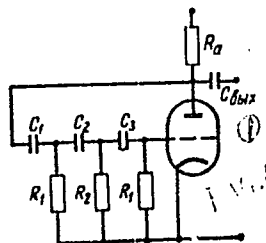


Рис. 4. Резистивно-емкостный генератор.

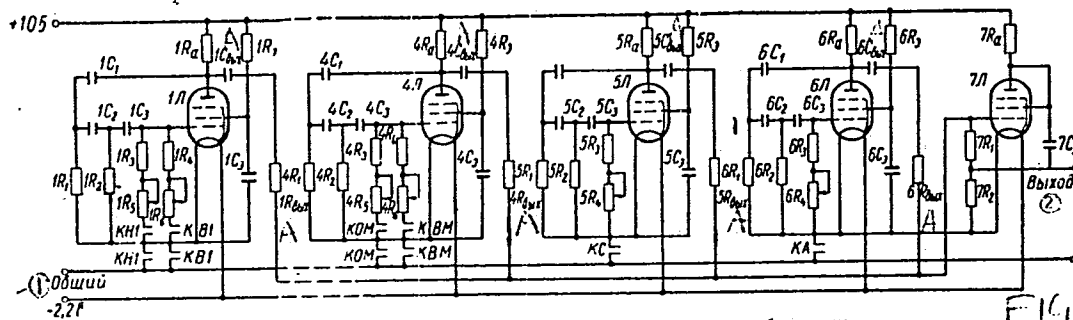
Card 4/5

29338 S/122/61/000/010/003/011  
D221/D304

Remote control of hoisting cranes

Fig. 5. Basic diagram of block of sonic frequency generators.

Legend: 1 - Common; 2 - output; subscripts A - output.



Card 5/5

S/135/61/000/012/006/008  
A006/A101

AUTHORS: Volkov, K. N., Safonov, A. I., Semenov, L. N., Engineers

TITLE: On the problem of raising the mechanization level of welding operations in shipbuilding

PERIODICAL: Svarochnoye proizvodstvo, no. 12, 1961, 22-24

TEXT: Since 1955 the rate of increase of mechanized welding operations in shipbuilding has dropped from 7 - 8% in 1948 - 1953 to 0.5 - 1.5% per year. To predetermine an increase of mechanization, it has become imperative to analyze the distribution of weld joints depending on their length, the spatial location of the seam during the welding process and the welding spot. The authors tabulated these parameters for ship hulls and bottoms. The data compiled are characteristic of distributing the extent of welding operations on the hull and the degree of their mechanization. They also make it possible to indicate the basic trends of further mechanization in welding operations. On the basis of these data the following conclusions are drawn: It is not possible to assure the prescribed level of mechanization by passing over to submerged arc welding of all joints to be welded in the lower position, i.e., 80% of the total amount of

Card 1/3

S/135/61/000/012/006/008  
A006/A101

On the problem of raising the mechanization ...

welding operations on the hull. The use of submerged arc welding for joints produced in the vertical and overhead position, is not considered to be expedient in shipbuilding, since up to 1 m long T joints and over 3 m butt joints are the standard types of welds in vertical seams. Up to 1 m long T joints and over 3 m long butt welds are the standard types for overhead seams. A further mechanization of welding operations should be achieved by introducing methods which assure the efficient welding of short joints in any spatial position. To attain the prescribed 85% mechanization of welding processes, in respect to labor consumption, not less than 92% of all welding operations of hull structures must be performed by mechanized means. Mechanization should be brought about both at the shops and at the dockyard. The existing technical means for welding in CO<sub>2</sub> will raise the extent of mechanization at all stages of shipbuilding. There are 2 tables and 4 figures.

Card 2/3

s/135/61/000/012/006/008  
A006/A101

On the problem of raising the mechanization ...

Table 2:

Spatial position of joint	Work place Name	Type of joint	Specific value of weld joints in the total amount of welding operations on the hull MS, at a seam length in m									
			On 1-2		On 2-3		On 3-4		On 4-5		On 5-6	
			M	P	M	P	M	P	M	P	M	P
Lower Hull	Manufacture of Hull sections	Tape	1,02	0,06	0,06	0,06	0,12	0,12	0,12	0,12	0,12	0,12
		Crane	0	0	0,10	0,10	0,10	0,10	0,10	0,10	0,10	0,10
	Dockyard Hull crane	Tape	0,11	0,03	0,03	0,03	0,12	0,12	0,12	0,12	0,12	0,12
		Crane	0,03	0,03	0,03	0,11	0,03	0,03	0,03	0,03	0,03	0,03
Vertical Hull	Manufacture of Hull sections	Tape	0	0,06	0	0,12	0	0,12	0	0,12	0	0,12
		Crane	0	0,12	0	0,12	0	0,12	0	0,12	0	0,12
	Dockyard Hull crane	Tape	0	1,12	0	0,06	0	0,12	0	1,12	0	0,06
		Crane	0	0,12	0	0,12	0	0,12	0	0,12	0	0,12
Overhead Hull	Manufacture of Hull sections	Tape	0	0,02	0	0,02	0	0,02	0	0,02	0	0,02
		Crane	0	0,02	0	0,02	0	0,02	0	0,02	0	0,02
	Dockyard Hull crane	Tape	0	1,11	0	0,10	0	0,10	0	1,11	0	0,10
		Crane	0	0,10	0	0,10	0	0,10	0	0,10	0	0,10
Horizontal Hull	Manufacture of Hull sections	Tape	0	0,02	0	0,10	0	0,10	0	0,10	0	0,10
		Crane	0	0,10	0	0,10	0	0,10	0	0,10	0	0,10
	Dockyard Hull crane	Tape	1,02	0,06	0,06	1,12	0,12	0,12	1,12	0,12	0,12	0,12
		Crane	0	0,12	0,12	0,12	0,12	0,12	0,12	0,12	0,12	0,12
Hull Total	Manufacture of Hull sections	Tape	1,02	0,06	0,06	1,12	0,12	0,12	1,12	0,12	0,12	0,12
		Crane	0	0,12	0,12	0,12	0,12	0,12	0,12	0,12	0,12	0,12
	Dockyard Hull crane	Tape	1,11	1,16	0,06	1,2	0,12	0,12	1,24	0,06	1,24	0,06
		Crane	1,03	1,07	0,03	0,03	0,03	0,03	1,03	0,03	1,03	0,03

Card 3/3

SEMENOV, L.N.; YAROSHENKO, A.P.

Simplified design of an apparatus for corrosion testing by the  
alternating immersion of samples coated with paint materials.

Lakokras.mat.i ikh prim. no.1:73-74 '62. (MIRA 15:4)  
(Materials--Corrosion) (Protective coatings)

1. SEMENOV, L. P.
2. USSR (600)
4. Antiquities - Assy Valley
7. Archaeological explorations in the Assy valley. ~~K~~rat.soob.IIMK, no. 46, 1952.

9. Monthly List of Russian Accessions. Library of Congress, March 1953, Unclassified.

SEMENOV, L. P. Cand Ped Sci -- (diss) "Study of the technique and methods of  
of "opornye [broad?] jumps." practising vaults." Mos, 1956. 18 pp 20 cm. (State Central Order of Lenin

Inst of Physical Culture im I.V. Stalin), 100 copies

(KL, 7-57, 110)

86

SEMENOV, L.P., aspirant

Convocaine benzoate for infiltration and conduction anesthesia.  
Veterinariia 37 no.10:54-55 0 '60. (MIRA 15:4)

1. Saratovskiy zooveterinarnyy institut.  
(Convolamine) (Anesthetics)

SEMENOV, L.P.; YAKOVLEVA, M.A.

Maintenance of structures built in permafrost areas. Prom.stroi.  
37 no.3:46-49 Mr '59. (MIRA 12:4)  
(Building--Cold weather conditions)

SEMENOV, L.P.

Thermotechnical calculations for pipelines. Mat. k osn. uch. o merz.  
zon. zem. kory no.6:64-68 '60. (MIRA 13:10)  
(Pipelines) (Frozen ground)

SEMENOV, L.P.; FEL'DMAN, G.M.; SEUR, Yu.L.

Thermal regime of petroleum pipelines. Mat. k osn. uch. o  
merz. zon. zem. kory no.7:119-131 '61. (MIRA 14:7)  
(Petroleum--Pipelines)  
(Frozen ground)

SEMENOV, L.P.

Temperature field of the soil around a petroleum pipeline. Sbor.  
nauch.rab.AKKH no.12:147-162 '62. (MIRA 16:4)  
(Petroleum pipelines) (Soil temperature)  
(Frozen ground)

SEMINOV, L.P.

Thermal calculation of a petroleum pipeline laid in seasonally  
frozen ground. Mat. k uch. o merz. zon. zem. kory no.9:38-52  
'63 (MIRA 18:1)

23737

15 2220 3009.3309

S/089/61/010/006/002/011  
B136/B201

21.6100

AUTHORS: Agranovich, V. M., Semenov, L. P.

TITLE: Theory of irradiation effect upon some properties of graphite

PERIODICAL: Atomnaya energiya, v. 10, no. 6, 1961, 572 - 576

TEXT: Some of the properties of graphite are changed under irradiation: it is dilated and its thermal conductivity is reduced. An accumulation of Wigner energy, which is liberated on heating, also takes place. These problems are discussed theoretically here. Under irradiation, lattice atoms penetrate between weakly bound lattice planes, whereby the distance between them grows larger and the lattice constant along the c-axis rises. Such interstitial positions are particularly stable if situated directly below (or above) an atom of an (n-) plane, and above (or below) the center of the lattice hexagon of the second (n-) plane. (Fig.1). This model is made the starting point of the investigation, ion defects being neglected. Binding energy and compressibility of an ideal graphite single crystal are calculated first. The spherically symmetrical Lenard-Johns potential for the interaction between two atoms in different planes is used in this

Card 1/5

'23737

Theory of irradiation ...

S/089/61/010/006/002/011  
B136/B201

connection. Theoretical and experimental values for the binding energy are  $E = -243 \text{ erg/cm}^2$  and  $E = -2.60 \text{ erg/cm}^2$ , and for compressibility  $\chi = 2.59 \cdot 10^{-12}$  and  $\chi = 2.97 \cdot 10^{-12} \text{ cm}^2/\text{dyne}$ . This good agreement justifies the application of the method to such a crystal as contains a given number of Frenkel' defects per unit volume. Equations

$$\left. \begin{aligned} 3y \left( \frac{\rho_1^4}{r_1^4} - r_1^{-4} \right) + \frac{\rho_1^4}{r_1^4} - \frac{1}{r_1^4} &= 0; \\ \frac{(a+y_c)}{r_1} \left( \frac{\rho_1^4}{r_1^4} - \frac{1}{r_1^4} \right) + \left( \frac{\rho_2^4}{r_2^4} - \frac{1}{r_2^4} \right) \frac{y}{r_2} + \\ &+ \frac{2y_c}{r_6} \left( \frac{\rho_2^4}{r_2^4} - \frac{1}{r_2^4} \right) = 0; \\ \frac{(1+x)}{r_1} \left( \frac{\rho_1^4}{r_1^4} - \frac{1}{r_1^4} \right) + \frac{(1+x)}{r_2} \left( \frac{\rho_2^4}{r_2^4} - \frac{1}{r_2^4} \right) - \\ - \frac{(1-2x)}{r_3} \left( \frac{\rho_2^4}{r_2^4} - r_3^{-4} \right) &= 0; \\ r_1^2 &= (1+x)^2 + (l_0 + y_c)^2; \\ r_2^2 &= y^2 + (1+x)^2; \\ r_3^2 &= (0.5-x)^2 + 0.75 + y_c^2; \\ r_4^2 &= (l_0 + y + y_c)^2. \end{aligned} \right\} \quad (10)$$

Card 2/5

Theory of irradiation ...

S/089/61/010/<sup>23737</sup>006/002/011  
B136/B201

$$\left. \begin{aligned} & \frac{(1+x')}{r_7} \left( -\frac{1}{r_1^2} + \frac{\rho_1^2}{r_1^3} \right) + \\ & + \frac{(1-x')}{r_6} \left( \frac{1}{r_1^2} - \frac{\rho_1^2}{r_1^3} \right) + \frac{\rho_1^2}{r_1^3} - r_1^{-1} = 0; \\ & \frac{(l_0+y')}{r_7} \left( \frac{\rho_1^2}{r_1^3} - r_1^{-1} \right) - \\ & - \frac{y'}{r_6} \left( \frac{1}{r_1^2} - \frac{\rho_1^2}{r_1^3} \right) = 0; \\ & r_6^2 = (1-x')^2 + (y')^2; \quad r_5^2 = (1+x')^2; \\ & r_7^2 = (l_0+y')^2 + (1+x')^2. \end{aligned} \right\} \quad (11)$$

for the equilibrium state of atoms in the  $\alpha$ - and  $\beta$ -planes are numerically solved (Table 1), and thereupon the potential of the interaction energy  $E_1$  of interstitial atoms with the atoms of both planes, and that of the planes among one another ( $E_2$ ) are determined. To find the equilibrium lattice constant, it is necessary to calculate the minimum of  $E_1 + E_2$ .

Card 3/5

23737

Theory of irradiation ...

S/089/61/010/006/002/011  
B136/B201

i. e., the solution of equation  $\frac{d}{dl_0} (\Delta E_1 + \Delta E_2) = 0$ . The numerical

values of the solution are given in Table 2. The Wigner energy is finally determined:  $\Delta W = \Delta E_1 + \Delta E_2 + E_3$ , where  $\Delta E_3$  is the margin of energy in the crystal. Table 3 gives the Wigner energy for some defect concentrations. As an increase of defects with irradiation is unknown, a direct comparison with experimental values is not possible, although it may be performed via the determination of the Wigner energy. The agreement appears to be good up to the region of high defect concentrations, where the neglect of defect interaction leads to deviations. There are 2 figures, 3 tables, and 5 references: 2 Soviet-bloc and 3 non-Soviet-bloc. The reference to the English-language publication reads as follows: B. Bacon, G. Warren, Acta crystallogr., 9, no. 12, 1029, (1956).

SUBMITTED: July 26, 1960

Card 4/5

23737

S/089/61/010/006/002/011

Theory of irradiation ...

TABLE 1					
$l_0$	$x$	$v$	$v_c$	$x'$	$v'$
1,19	0,0185	0,3495	0,2575	0,0527	0,4400
1,20	0,0150	0,3487	0,2500	0,0519	0,4360
1,21	0,0123	0,3475	0,2440	0,0507	0,4320
1,22	0,0100	0,3465	0,2390	0,0498	0,4280
1,23	0,0078	0,3450	0,2340	0,0488	0,4232
1,24	0,0057	0,3440	0,2300	0,0478	0,4190
1,25	0,0040	0,3425	0,2255	0,0467	0,4150
1,26	0,0025	0,3400	0,2220	0,0456	0,4108
1,27	0,0012	0,3370	0,2180	0,0445	0,4065
1,28	0,0000	0,3340	0,2147	0,0434	0,4020
1,29	-0,0013	0,3317	0,2110	0,0423	0,3980
1,30	-0,0025	0,3300	0,2075	0,0413	0,3940
1,31	-0,0030	0,3285	0,2040	0,0404	0,3900
1,32	-0,0048	0,3266	0,2005	0,0397	0,3865
1,34	-0,0067	0,3228	0,1940	0,0386	0,3800
1,36	-0,0086	0,3185	0,1870	0,0372	0,3735
1,38	-0,0102	0,3158	0,1803	0,0358	0,3660
1,40	-0,0115	0,3140	0,1740	0,0343	0,3580
1,42	-0,0128	0,3120	0,1680	0,0328	0,3515
1,44	-0,0139	0,3100	0,1620	0,0314	0,3445
1,46	-0,0150	0,3075	0,1570	0,0300	0,3375

Card 5/5

$d$	$c_0, \lambda$	$r_d$	$c_0, \lambda$	$r_d$	$c_0, \lambda$	Tab. 2
$10^{-3}$	6,71	$5 \cdot 10^{-3}$	6,88	$1,5 \cdot 10^{-2}$	7,00	
$2 \cdot 10^{-3}$	6,77	$6,5 \cdot 10^{-3}$	6,91	$2 \cdot 10^{-2}$	7,04	
$3 \cdot 10^{-3}$	6,82	$8 \cdot 10^{-3}$	6,94	$3 \cdot 10^{-2}$	7,11	
$4 \cdot 10^{-3}$	6,85	$9 \cdot 10^{-3}$	6,95	$5 \cdot 10^{-2}$	7,16	

$r_d$	$\Delta IV, \kappa A/cm^3$	$r_d$	$\Delta IV, \kappa A/cm^3$	$r_d$	$\Delta IV, \kappa A/cm^3$	Tab. 3
$10^{-3}$	34,6	$5 \cdot 10^{-3}$	169,8	$1,5 \cdot 10^{-2}$	497,0	
$2 \cdot 10^{-3}$	69,0	$6,5 \cdot 10^{-3}$	210,0	$2 \cdot 10^{-2}$	641,0	
$3 \cdot 10^{-3}$	103,0	$8 \cdot 10^{-3}$	268,8	$3 \cdot 10^{-2}$	983,2	
$4 \cdot 10^{-3}$	140,0	$9 \cdot 10^{-3}$	310,0	$5 \cdot 10^{-2}$	1628,2	

24,6110

S/181/62/004/003/032/045  
B108/B104

AUTHOR: Semenov, L. P.

TITLE: Spectrum of graphite lattice vibrations

PERIODICAL: Fizika tverdogo tela, v. 4, no. 3, 1962, 780-789

TEXT: With a method developed in earlier papers (K. B. Tolpygo, V. S. Mashkevich. ZhETF, 32, 520, 1957; K. B. Tolpygo. PTT, 3, 943, 1960) the author studied the spectrum of lattice vibrations of graphite. Expressions are derived for the frequencies of the acoustic and optical long-wave vibrations. The vibration spectrum of graphite consists of fourteen branches beyond the point  $n = n_0$ : three acoustic, nine optical, and two light branches. When calculations are made generally with consideration of the polarizability of the electron shells and retardation of interaction, two additional vibrational branches will appear, and the mechanical, optical, and light vibrations will be mixed into one system of two light and four optical vibrations with limiting frequencies  $\omega_{0,3,4}^2$ . The retardation of interaction has no effect on the acoustic vibrations. Combination scattering with two lines in the first-order spectrum is Card 1/2

Spectrum of graphite lattice vibrations

S/181/62/004/003/032/045  
B108/B104

supposed to take place in graphite. The point  $\Gamma_{0|3,4}^{21}$  is a point of light absorption. Absorption is a first-order effect. The theory contains the parameters  $A_1, A_2, A_3, K_1, K_2, K_3, a_0, k, s_1, s_2, s_3, s_4$ . The parameters  $s_1, s_2, s_3, s_4$  can be computed by using the Lennard-Jones potential. The other parameters can be computed immediately if the functions  $\psi_{2aj}^2(\vec{r})$  (wave functions of the isolated carbon atom in the state  $j$ ) are known. K. B. Tolpygo is thanked for discussions. There are 1 figure and 6 references: 3 Soviet and 3 non-Soviet. The three references to English-language publications read as follows: C. F. Newell. J. Chem. Phys., 24, 1049, 1956 and 27, 240, 1957; Yoshimori. J. Phys. Soc. Japan, 11, 352, 1956. ✓c

SUBMITTED: September 18, 1961 (initially) December 2, 1961 (after revision)

Card 2/2

SEMENOV, L.P.

USSR/Pharmacology. Pharmacognosy. Toxicology - Local Anaesthetics. T-4

Abs Jour : Referat Zhur - Biologiya, No 16, 1957, 71699

Author : Semenov, L.P.

Inst :

Title : On the Toxicity and Anaesthetic Properties of Convocaine Benzoate.

Orig Pub : Tr. Saratovsk. Zootechn.-Vet. In-ta, 1956, 6, 189-191

Abstract : Tests for determination of convocaine (I) toxicity were done on dogs and horses. I was administered to dogs in 2-18 mg/kg doses and to horses 1-4 mg/kg. It was established that 3 mg/kg of I was the limiting dose for dogs and horses; 18 mg/kg was lethal. For operating on animals under infiltration anaesthesia the author recommends I in 1:500 and 1:1000 dilution with a total quantity of I in solution of no more than 4 mg/kg.

Card 1/1

- 32 -

AGRANOVICH, V.M.; MIKHLIN, E.Ya.; SEMENOV, L.P.

Kinetics of the swelling of fissionable materials caused by the separation of the gaseous phase from a supersaturated solid solution. Atom. energ. 15 no.5:393-403 N '63. (MIRA 16:12)

SEMENOV, L.P.

Theory of coalescence of gas pores in swelling. Atom. energ. 15  
no. 5:404-408 N '63. (MIRA 16:12)

SEMENOV, L.S.

Characteristics of the distribution of postmagmatic ore deposits  
in the lower Tunguska and Stony Tunguska interfluvial area. Mat.  
VSEGEI no.31:45-56 '60. (MIRA 14:3)  
(Tunguska Valley—Ore deposits)

SEMENOV, L.S.

Postmagmatic mineralization associated with trappean intrusions  
having high alkali content. Inform.sbor.VSEGEI no.40:109-122  
'60. (MIRA 14:12)

(Podkamennaya Tunguska Valley--Rocks, Igneous)  
(Lower Tunguska Valley--Rocks, Igneous)

TSIN, M.R., inzh.; ZATULOVSKIY, S.S., inzh.; DIDYK, B.S., inzh.;  
KOZENKO, A.V., inzh.; SHIYAN, V.G., inzh.; SEMENOV, L.S., inzh.

Casting pressure pipe of cast iron with spheroidal graphite.  
Met.i gornorud.prom. no,5:37-41 S-0 '62. (MIRA 16:1)

1. Institut liteynogo proizvodstva AN UkrSSR (for TSin,  
Zatulovskiy, Didyk, Kozenko). 2. Ukrainskiy nauchno-issledova-  
tel'skiy trubnyy institut (for Shiyan, Semenov).  
(Pipe, Cast iron)

SEMENOV, L.S.; YURCHENKO, A.L.; KOLONEY, T.N.

Degree of locking as the indicator of the airtightness of the seaming. Kons. i ov. prom. 18 no.8:26-28 Ag '63. (MIRA 16:8)

1. Konservnyy kombinat v Krymske (for Semenov). 2. Krasnodarskiy nauchno-issledovatel'skiy institut pishchevoy promyshlennosti (for Yurchenko, Koloney).

(Tin cans—Testing)

(Sealing (Technology))

SEMENOV, L.S.; VARFOLOMEYEV, V.G.; YURCHENKO, A.L.

Manufacture of "SKO" covers from lacquer-coated aluminum. Kons.  
i ov. prom. 18 no.11:28-30 N '63. (MIRA 16:12)

1. Konservnyy kombinat v Krymske (for Semenov, Varfolomeyev).
2. Krasnodarskiy nauchno-issledovatel'skiy institut pishchevoy  
promyshlennosti (for Yurchenko).

AUTHORS: Chernyshev, Ye. A., Dolgaya, M. Ye., 79-28-3-10/61  
Yegorov, Yu. P., Semenov, L. V., Petrov, A. D.

TITLE: The Silicon Alkylation of Aromatic Compounds With  
Dichloro-Alkylsilane-Chlorides  
(Kremnealkilirovaniye aromaticheskikh soyedineniy  
dikhloraalkilsilankhloridami)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 3, pp. 613-616  
(USSR)

ABSTRACT: Based on earlier investigations of the same authors, in  
which the silicon alkylation of aromatic compounds was  
carried out with chloroalkyltrichlorosilanes and  
chloroalkyldichlorosilanes in the presence of  $AlCl_3$  or  
metallic aluminum, they investigated the same alkylation with  
benzene, toluene and chlorobenzene together with dichloro-  
alkylsilanechlorides. These reactions did not take place as  
simply as the above mentioned, the yields also being small  
(3-48 % compared with 30-80 %); this most probably because  
of the intensive formation of resin. Besides the character  
of the final products of alkylation varied according to the

Card 1/3

The Silicon Alkylation of Aromatic Compounds With Dichloro- 79-28 3-10/61  
Alkylsilane-Chlorides

nature of the two components (table 1). The fact is of interest that with  $\alpha,\alpha,\beta,\beta$ - and  $\alpha,\beta$ -dichloroethyltrichlorosilanes chlorobenzene reacts mainly with the two chlorine atoms of the dichloroalkyltrichlorosilane, giving three times higher yields than benzene. Also toluene reacts with greater yields, however, only with one chlorine atom, the other being substituted by a hydrogen atom. It is known that toluene rather easily gives its electrons to a binding with hydrogen. In order to investigate the structure of the obtained compounds their ultraviolet absorption spectra were taken. It was shown that in the silicon alkylation of benzene, toluene and chlorobenzene with dichloroethyltrichlorosilanes one chlorine atom in the dichloroethyl radical is substituted by hydrogen. With benzene and chlorobenzene this reaction does not occur as main reaction, which, however, is entirely the case with toluene. In the silicon alkylation by means of dichloromethylsilanechlorides no reduction reactions are observed. Ultraviolet absorption spectra were taken for a number of synthesized compounds

Card 2/3

The Silicon Alkylation of Aromatic Compounds With Dichloro- 79-28-3-10/61  
Alkylsilane-Chlorides

after their methylation; this made possible to specify  
their structure more exactly.  
There are 2 figures, 2 tables, and 6 references  
which are Soviet

ASSOCIATION: Institut organicheskoy khimii Akademii nauk SSSR  
(Institute for Organic Chemistry, AS USSR)

SUBMITTED: March 11, 1957

Card 3/3

SEME NOU, L.V.

5(3), 5(4)  
AUTHORS:

Iorikov, S. S., Belikov, V. M., Yegorov, Yu. P., Safonova, E. N.,  
Semenov, L. V.

TITLE:

Investigations in the Field of Nitropyrroles. Communication 3.  
Ultra-violet Absorption Spectra and Tautomeric Transformations  
of Some Nitropyrroles

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,  
1959, Nr 8, pp 1438-1444 (USSR)

ABSTRACT:

In the present paper the ultra-violet spectra of 8 nitro-  
pyrrole derivatives are given. The results of the investigation  
are given in table 1. It is indicated that the position of the  
NO<sub>2</sub> group in the pyrrole nucleus can be determined by means  
of the ultra-violet spectrum. The already supposed structure  
of 1-methyl-3,4-dinitropyrrole (Ref 1) could be proved. The  
tautomeric phenomena were investigated in a series of deri-  
vatives not substituted at the nitrogen of nitropyrrole and  
it could be shown that the solubility of these compounds increases  
with the increasing number of nitro groups. The same effect  
could be observed by regrouping the nitro group from position  
β into α. This phenomenon was considered an inductive effect

Card 1/2

of the nitro group on the polarization of the N-H bond.  
There are 6 figures, 1 table, and 17 references, 6 of which  
are Soviet.

ASSOCIATION:

Institut organicheskoy khimii im. N. D. Zelinskogo Akademii  
nauk SSSR  
(Institute of Organic Chemistry named N. D. Zelinsky of  
the Academy of Sciences, USSR)

SUBMITTED:

November 30, 1957

Card 2/2

SKORODUMOVA, I.P.; ~~SEMENOV, L.V.~~

"Soviet Tuva." P.A.Shakhunova, B.N.Likhanov. Reviewed by I.P.  
Skorodumov, L.V. Semenov. Geog.v shkole 19 no.5:75 S-O '56.  
(Tuva Autonomous Province) (Shakhunova, P.A.)  
(Likhanov, B.N.)

AUTHORS: Semenov, L.V. (Cand. Econ. Sc.) and Shakhova, O.V.

TITLE: Coke from brown coal, its production and uses. (Koks iz burogo uglya, yego proizvodstvo i primeneniye). 68-5-14/14

PERIODICAL: "Koks i Khimiya" (Coke and Chemistry), 1957, No.5, pp.62-64 (U.S.S.R.)

ABSTRACT: A review of literature on the subject of the production and utilisation of coke from brown coal is given.

There are 7 references, including one Slavic.

ASSOCIATION: Council of the Academy of Science of the USSR for Studies of Productive Resources. (Sovet po izucheniyu proizvoditel'nykh sil AN SSSR).

AVAILABLE:

Card 1/1

SEMENOV, L.V., kandidat ekonomicheskikh nauk.

Scientific treatment of complex regional problems. (Coordination  
conference of the boards for study of productivity). Vest.  
AN SSSR 27 no.6:109-111 Je '57. (MIRA 10:7)  
(Russia--Economic policy)

SKORODUMOVA, Irina Petrovna; SEMENOV, Lev Vladimirovich; DOBRONRAVOVA,  
K.O., red.; VILENSKAYA, E.N., tekhn.red.; KISELEVA, Z.A., red.kart

[Krasnoyarsk Territory; sketches of its natural resources and  
their use] Krasnoyarskii kraj; ocherki o prirodnykh bogatstvakh  
i ikh ispol'zovanii. Moskva, Gos.izd-vo geogr. lit-ry, 1958.  
69 p. (MIRA 12:1)

(Krasnoyarsk Territory--Economic conditions)

SOV/26-58-1-32/36

AUTHORS: Kurochkin, G.D., Candidate of Geologo-Mineralogical Sciences;  
Semenov, L.V., Candidate of Economic Sciences (Moscow)

TITLE: A Monograph on a Vast and Rich Province (Monografiya ob ob-  
shirnom i bogatom kraye) M.I. Pomus: West Siberia. An Eco-  
nomico-Geographical Characteristic. State Publishing House  
of Geographical Literature 1956, 643 pp (M.I. Pomus: Zapadnaya  
Sibir'. Ekonomiko-geograficheskaya kharakteristika. Gosudarstven-  
noye izdatel'stvo geograficheskoy literatury 1956, 643 str.)

PERIODICAL: Priroda, 1958, Nr 1, pp 123-124 (USSR)

ABSTRACT: This is a review of the above mentioned book.

Card 1/1

68-68-6-3/21

AUTHOR: Semenov, L.V., Candidate of Economic Sciences

TITLE: Tuva Coals as the Basis of the Coal-tar Chemical Industry in the East (Tuvinskiye ugli kak baza koksokhimicheskoy promyshlennosti vostoka)

PERIODICAL: Koks i Khimiya, 1958, Nr 6, pp 10-11 (USSR)

ABSTRACT: At present coals of the type K (coking) and Zh (fat) constitute about 70% of the coal blends used in the Eastern Coke Oven Works. The main source of supply of these coals is from the Kuznetsk Basin where their availability is limited. Therefore coal deposits in the Tuvinskaya avtonomnaya oblast', discovered in the post war years, are of particular importance. A brief outline of the coal measures discovered in the district is given. Laboratory and pilot plant coking of some of the coals showed that a good coke can be produced from these coals and that with a 20% leaning addition a high quality metallurgical coke can be obtained. The characteristic feature of the coals is their low sulphur (about 0.5%) and low phosphorous (0.004-0.045%) content. No details are given.

ASSOCIATION: SOPS 1. Chemical industry 2. Coal tar--Manufacture 3. Coal--Application  
Card 1/1 4. Coal--Sources

SEMENOV, Lev Vladimirovich; PANTELEYEV, I.I., red.; SAMRINA, A.A.,  
tekhn.red.

[Coal resources of Khakassia and prospects for their utilization]  
Ugol'nye resursy Khakasii i perspektivy ikh ispol'zovaniia.  
Abakan, Khakasskoe knizhnoe izd-vo, 1959. 71 p. (MIRA 13:6)  
(Khakass Autonomous Province--Coal)

POPOV, P.A.; SEMENOV, L.V.

"Gases as a powerful source of energy and of chemical raw materials"  
by P.A. Borisov, A.L. Rabkina. Reviewed by V.M. Popov, L.V. Semenov.  
Gaz. prom. 4 no.12:51-52 D '59. (MIRA 13:3)  
(Gas, Natural) (Gases)  
(Borisov, P.A.)

SEMENOV, L.V., kand.ekon.nauk

Prospects and economic effectiveness of the further development  
of the Soviet peat industry. Torf.prom. 36 no.4:16-19 '59.  
(MIRA 12:9)

1. Institut goryuchikh iskopayemykh im. G.M.Krzhizhanovskogo  
AN SSSR.

(Peat industry)

S/030/60/000/05/44/056  
B015/B008

AUTHORS: Popov, V. M., Candidate of Technical Sciences,  
Semenov, I. V., Candidate of Economic Sciences

TITLE: The Utilization of Fuel Gases

PERIODICAL: Vestnik Akademii nauk SSSR, 1960, No. 5, pp. 110-112

TEXT: An All-Union Conference was held in Moscow from February 23 to 25, which was convened by the Nauchnyy sovet po probleme "Goryuchiye gazy" (Scientific Council for the Problem "Fuel Gases") and dealt with the coordination of the scientific activities for the utilization of fuel gases in the national economy. N. V. Lavrov, Institut goryuchikh iskopayemykh Akademii nauk SSSR (Institute of Mineral Fuels of the Academy of Sciences USSR) elaborated a perspective scheme of the oxidizing pyrolysis of gaseous paraffin hydrocarbons in unsaturated hydrocarbons. V. F. Kopytov, Institut ispol'zovaniya gaza v kommunal'nom khozyaystve i promyshlennosti Akademii nauk Ukrainskoy SSR (Institute of Utilization of Gas in the Municipal Economy and Industry of the Academy of Sciences of the Ukrainskaya SSR) pointed out the importance of securing a suitable speed and direction of

Card 1/2

The Utilization of Fuel Gases

S/030/60/000/05/44/056  
B015/B008

the furnace flame. A. S. Predvoditelev reported on the theory of the ignition of fuel gas mixtures and Ts. A. Bakhshiyev on tubular furnaces with radiating walls and their heat calculation. The insufficient contact of the scientific research institutes with the sovnarkhoz and the insignificant practical utilization of the gas and the new apparatus in industry are underlined next. The Conference considered it necessary to continue the research for the elaboration of the theoretical bases of the combustion processes. It was decided to speed up scientific research activities for the setting up of rational technological schemes for the supply of gas for agriculture and households. Scientific research in the field of the technical-economic efficacy of the utilization of gas in the national economy is to be increased. The Conference requested the Scientific Council in connection with the problem "Fuel Gases" to work out measures towards speeding up the utilization of the research results. ✓

Card 2/2

SEMENOV, L.V.

Electrification of entry signal lights. Avtom. telem. i svyaz' 4  
no.9:36-37 S '60. (MIRA 13:9)

1. Zamestitel' nachal'nika Stavropol'skoy distantzii signalizatsii  
i svyazi Severo-Kavkazskoy dorogi.  
(Railroads--Signaling)

POPOV, V.M.; SEMENOV, L.V.

Use of natural gas in the cement industry. Gaz.prom. 5 no.8:50-51

Ag '60.

(MIRA 13:10)

(Gas, Natural)

(Cement industries)

SEMENOV, L.V.

Problems of labor productivity in the coal mining industry  
("Potentials for the increase of labor productivity in the  
coal mining industry" by A.S.Dovba. Reviewed by L.V.Semenov.  
Sots.trud 5 no.8:150-153 Ag '60. (MIRA 13:11)  
(Coal mines and mining--Labor productivity)  
(Dovba, A.S.)

SEMENOV, L.V., starshiy nauchnyy sotrudnik; DAVYDOV, V.P., mladshiy  
nauchnyy sotrudnik

More about the order of planning and expenditure accounting in coal  
mines. Ugol' 35 no. 4:57-58 Ap '60. (MIRA 14:4)

1. Institut goryuchikh iskopayemykh AN SSSR.  
(Coal mines and mining--Accounting)

✓  
POPOV, V.M., kand.tekhn.nauk; SEMENOV, L.V., kand.ekon.nauk

Use of combustible gases. Vest.AN SSSR 30 no.5:110-112  
My '60. (MIRA 13:5)  
(Gas as fuel)

SEMENOV, L.V.

Problems in the utilization of industrial gases. Vest.AN SSSR 30  
no.8:128-129 Ag '60. (MIRA 13:8)

(Gases)

SEMENOV, L.V.; POPOV, V.M.

Efficient combustion of natural gas. Vest.AN SSSR 30 no.9:  
121-122 S '60. (MIRA 13'9)  
(Gas, Natural) (Combustion)

SEMENOV, L.V.; MIROSHNICHENKO, V.; PINSKIY, S.Ye.

Technological conferences. Ugol' 35 no.11:60-61 N '60.

(MIRA 13:12)

1. Institut goryuchikh iskopayemykh AN SSSR (for Semenov)
2. Dom tekhniki kombinata Rostovugol' (for Miroshnichenko).  
(Coal mines and mining—Congresses)

POPCV, V.N., kand.tekhn.nauk; CHERNOV, L.V., kand.ekonom.nauk

New method for obtaining industrial gases. Vest. AN S.S.R 31  
no. 2:116-117 P '61. (MIRA 14:2)  
(Gas manufacture and works)

SEMENOVA, N.K.; SEMENOV, L.V.; POPOV, V.M.

Technical and economic indices for the use of natural gas in open-  
hearth process. Trudy IGI 16:467-477 '61. (MIRA 16:7)  
(Open-hearth process) (Gas, Natural)

SYCHEV, Sergey Mikhaylovich; SEMENOV, Leonid Vladimirovich;  
LOMAZOVA, K.L., red.; UL'YANETS, A.A., tekhn. red.

[Organization of planning and estimating work in building] Organizatsiia proektno-smetnogo dela v stroitel'stve. Kiev, Gosstroizdat USSR, 1963. 121 p.  
(MIRA 17:2)

SEMENOV, L.V.

Production of containers from polyethylene films. Prom. khim.  
reak. i osobo chist. veshch. no.1:36 '63. (MIRA 17:2)

SEMENOV, L.V.; DAVYDOV, V.P.

Ore-fuel granules represent a new efficient material in metallurgy. Trudy IGI 22:131-135 '63. (MIRA 16:11)

DAVIDOV, V.P.; SEMENOV, L.V.; VASIL'YEV, S.F.

Oxidizing pyrolysis of gasolines. Nefteper. i neftekhim. no.10:23-  
26 '63. (MIRA 17:2)

1. Institut gor'yuchikh iskopayemykh AN SSSR.

DAVYDOV, V.P.; SEMENOV, L.V.; KONSTANTINOVA, T.N.

Economic efficiency and prospects of introducing the method  
of coke charge granulation in industry. Trudy IGI 22:169-177  
'63. (MIRA 16:11)

DAVYDOV, V.P.; SEMENOV, L.V.

Technical and economic indices of the production of high quality solvents. Khim. i tekhn. topl. i masel 8 no.12:43-45 D '63.  
(MIRA 17:1)

1. Institut goryuchikh iskopayemykh AN SSSR.